46725

ORRES. CONTROL
UTGOING LTR NO.

ORDER# 4700.1
94 RF 11926

DIST.	LTR	ENC
ARAL, M.E.		
RLINGAME, A.H.		
SBY, W.S.		
ANCH, D.B.		
RNIVAL, G.J.		
VIS, J.G.		
RRERA, D.W.		
AY, R.E.		
IS, J.A.		
OVER, W.S.		
LAN, P.M.		
NNI, B.J.		
RMAN, L.K.		
ALY, T.J.		
DAHL, T.		
BIG, J.G.		
TCHINS, N.M.		
CKSON, D.T.		
LL, R.E.		
ESTER, A.W.		
RX, G.E.		
DONALD, M.M.		
KENNA, F.G.		
NTROSE, J.K.		
RGAN, R.V.		
TTER, G.L.		
ZUTO, V.M.		
SING, T.L.		
NDLIN, N.B.		
HWARTZ, J.K.		
TLOCK, G.H.		
EWART, D.L.		
IGER, S.G.	X	X
Chromec, FW	X	X
Guinn, LA	X	X
Hopkins, JK	X	X
Roberts, RS	X	X
RRES. CONTROL	X	X
MN RECORD/080	X	2
AFFIC		
TS/T130G		

ASSIFICATION:

NI		
CLASSIFIED		
NFIDENTIAL		
CRET		

UTHORIZED CLASSIFIER SIGNATURE
OCUMENT CLASSIFICATION VIEW WAIVER PER ASSIFICATION OFFICE

REPLY TO RFP CC NO: N/A

TION ITEM STATUS
PARTIAL/OPEN
☐ CLOSED

R APPROVALS:
FWC:kld

IG. & TYPIST/INITIALS
FWC:kld

1/3

EG&G ROCKY FLATS

EG&G ROCKY FLATS, INC.
ROCKY FLATS PLANT, P.O. BOX 464, GOLDEN, COLORADO 80402-0464 • (303) 966-7000

November 30, 1994 94-RF-11926

Jessie M. Roberson
Assistant Manager for
Environmental Restoration
DOE, RFFO

Attn:N. I. Castaneda

REJECTION OF THE PROGRAMMATIC RISK-BASED PRELIMINARY REMEDIATION GOALS FOR THE ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE BY THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT - SGS-624-94

Action: Meeting at your earliest convenience to discuss further action..

The following comments are written per the request of the Department of Energy, Rocky Flats Field Office (DOE,RFFO) in support of rejection of the comments of the Colorado Department of Public Health and Environment (CDPHE), dated November 15, 1994. The Programmatic Risk-based Preliminary Remediation Goals (PPRGs) were developed in accordance with appropriate and relevant guidance from the U. S. Environmental Protection Agency (USEPA) and have been formally accepted by USEPA in a letter to DOE,RFFO dated November 18, 1994.

EG&G has reviewed fourteen Feasibility Studies performed in Colorado that are on file with the Superfund Records Center. In all cases, preliminary remediation goals were developed following USEPA guidance. Child receptors were included by time averaging only for the soil ingestion pathway. Children were considered separately for soil ingestion only in cases where lead exposures were of concern.

EG&Gs responses to the CDPHE's comments of November 15, 1994 are attached.

Please direct any comments to Win Chromec of the Environmental Restoration Program Division/Risk Assessment at extension 8641.

For S. G. Stiger, Director
Environmental Restoration
Program Division

FWC:kld

Orig. and 1 cc - J. M. Roberson

Attachment:
As Stated

cc:
M. N. Silverman -DOE, RFFO

ADMIN RECORD
SW-A-003724

1/3

RESPONSE TO NOVEMBER 14, 1994 CDPHE COMMENTS ON PROGRAMMATIC RISK-BASED PRELIMINARY REMEDIATION GOALS (PPRGs)

General

The Colorado Department of Public Health and Environment (CDPHE) states that "the draft PPRGs were submitted in defiance of our previous agreements." As stated in our September 22, 1994 response to comment #1, a meeting was held on May 24, 1994, at which the methodology, including the equations and exposure factors, to be used for calculation of the PPRGs was presented to U. S. Environmental Protection Agency (USEPA) and CDPHE. The equation for residential exposure to soils included a time-averaged soil ingestion term for adults and children, as required by USEPA CERCLA guidance (RAGS, Part B and Region VIII Technical Guidance #RA-01). No other scenarios included child receptors. RFFO followed specific Environmental Protection Agency (EPA) guidance in not including child receptors in other PPRG scenarios. (See discussion below) The only comment received at the time of the meeting was that a dermal assessment needed to be completed if no further action was an option following application of the CDPHE conservative screen.

Documentation at the Superfund Records Center for the following 14 Feasibility Studies performed for Colorado sites was reviewed to determine how PRGs were calculated:

ASARCO Inc.-Globe Plant
Broderick Wood
California Gulch
Central City-Clear Creek
Chemical Sales
Denver Radium
Eagle Mine
Lincoln Park
Lowry Landfill
Marshall Landfill
Sand Creek Industrial
Smuggler Mountain
Uravan Uranium
Woodbury Chemical

The conclusion of the review was that remediation goals have been based on USEPA guidance (RAGS, Part B) using residential scenarios which time averaged child and adult exposures for soil ingestion. Children were not singled out as separate receptors, except in cases where lead (Pb) exposures were important.

DOE, RFFO has followed applicable and relevant guidance in development of the PPRGs and is not at fault for wasting valuable time. It is EG&G's recommendation that DOE, RFFO follow USEPA guidance for development of PPRGs for the Rocky Flats Environmental Technology Site. The demands of CDPHE are not in accordance with CERCLA guidance, and are not toxicologically defensible. (See specific comments.)

RESPONSE TO NOVEMBER 14, 1994 CDPHE COMMENTS ON PROGRAMMATIC RISK-BASED PRELIMINARY REMEDIATION GOALS (PPRGs) (continued)

Specific Comments

1) Current USEPA guidance (RAGS, Part, B) states that a time weighted average for children and adults should be used for soil ingestion due to differences in rates of ingestion. It is not suggested that children be used for any other exposure pathways in the development of PRGs. It is also specifically stated that RME risks should not be developed for multiple pathways because this will lead to excess conservatism. All PPRGs use RME assumptions and are, therefore, more conservative than required by USEPA.

The use of a residential childhood exposure scenario for each pathway and medium in the calculation of PRGs is not appropriate or toxicologically supportable. There is no empirical evidence that children form a sensitive subpopulation to the toxic effects of most contaminants, lead is a notable exception. Furthermore, the technique USEPA uses to calculate toxicity values, Reference Doses and slope factors, is based on the lowest observed adverse effect level (LOAEL), the no observed adverse effect level (NOAEL), or highly conservative extrapolation models based on data for the most sensitive subpopulation. The final toxicity values also include safety or uncertainty factors that account for uncertainty associated with sensitive subpopulations. Therefore, it is not appropriate to separate out children as a sensitive subpopulation, except for specific toxins such as lead. Benchmark PRGs published by USEPA Regions III, IX, and X do not include children as separate receptors. The PPRGs calculated for RFETS are highly conservative and are properly derived for their use.

2) As stated in the response to comment #4, the comment pertains to the use of the PPRGs in the CDPHE conservative screen, not to their development. Table 4 does not need to be modified, as it is consistent with DOE's response to comment #4. For the purpose of the CDPHE conservative screen DOE has agreed to define surface soil as occurring from 0–12 feet. There is no need to change the table.

3) As stated in the response to CDPHE comment #5, the PPRGs are a screening level tool. As their title implies, they are "preliminary" quantitative values and are meant to evolve during the RI/FS process. Typically, numerical PRGs are restricted to chemicals of concern that have had published chemical/media–specific toxicity values. No evidence has been found that indicates Region VIII USEPA has required any special treatment of analytes for which no published chemical/media–specific toxicity values were available. Provisional values for some chemicals, such as aluminum, sec and tert–butylbenzene, cobalt, lithium, naphthalene, trichloroethene, tetrachloroethene have been incorporated into the PPRGs. Chemicals without toxicity factors are appropriately examined in the Toxicity Assessment portion of the Baseline Risk Assessment.